

**AMENDMENTS TO THE CLAIMS**

1)-22) (Canceled).

23) (Currently Amended) ~~Apparatus according to claim 22,~~ Apparatus for monitoring the status of a horse, wherein the apparatus includes a processing system adapted to:

(A) receive, from a first sensor provided in a horse blanket, indicating data indicative of at least one health status indicator;

(B) receive, from a second sensor, position data indicative of the position of the horse; and,

(C) determine the health status of the horse in accordance with the indicating data and the position data,

wherein the processing system determines the health status of the horse using a predetermined algorithm, the predetermined algorithm defining a relationship between the at least one health status indicator and movement of the horse, and

wherein the predetermined algorithm includes:

(i) determining at least a low heart rate during low speed exercise;

(ii) determining a number of heart rates during high speed exercise;

(iii) perform linear regression to calculate a linear regression line;

(iv) calculate, using the linear regression line, the velocities at at least one of:

(1) heart rates of 200 beats per minute (V200); and,

(2) HRmax (VHRmax);

(v) determine a fitness indicator in accordance with the calculated at least one velocity;

wherein the method ~~apparatus~~ includes deleting all outlier values by at least one of:

(a) deleting all results with a velocity of less than 40 kph;

(b) deleting all results during the period after exercise (from the time of occurrence of HRmax);

(c) deleting all data equal to at least one of:

(i) HRmax; (ii) HRmax-1; (iii) HRmax-2; and, (iv) HRmax-3;

(d) deleting all data where there has been an increase in velocity, but that increase was not accompanied by an increase in HR; and

(e) deleting any data points which have a HR that is more than 10 beats per minute above the regression line at that speed, and recalculate the regression line if such outliers are deleted.

24) (Currently Amended) ~~Apparatus according to claim 16,~~ Apparatus for monitoring the status of a horse, wherein the apparatus includes a processing system adapted to:

(a) receive, from a first sensor provided in a horse blanket, indicating data indicative of at least one health status indicator;

(b) receive, from a second sensor, position data indicative of the position of the horse; and,

(c) determine the health status of the horse in accordance with the indicating data and the position data,

wherein the processing system is adapted to obtain indicating data and position data relating to a number of horses, the processing system being adapted to determine the health status of each of the number of horses.

25) (Currently Amended) ~~Apparatus according to claim 16, the apparatus being used with the apparatus of claim 1~~ Apparatus for monitoring the status of a horse, wherein the apparatus includes:

(a) a blanket having a first sensor, the first sensor being adapted to generate indicating data indicative of at least one health status indicator; and,

(b) a second sensor for generating position data indicative of the position of the horse, and

\_\_\_\_\_ (c) a processing system adapted to:

\_\_\_\_\_ (i) receive, from a first sensor provided in a horse blanket, indicating data indicative of at least one health status indicator;

\_\_\_\_\_ (ii) receive, from a second sensor, position data indicative of the position of the horse; and,

\_\_\_\_\_ (iii) determine a health status of the horse in accordance with the indicating data and the position data.

Claims 26-39 (Cancelled).

40) (New) Apparatus according to claim 23, wherein the health status indicator includes at least one of the horse's: (a) heart rate; (b) blood pressure; (c) temperature; breathing rate; (d) blood flow rate; and, (e) blood oxygenation levels.

41) (New) Apparatus according to claim 23, wherein the second sensor is formed from a GPS sensor.

42) (New) Apparatus according to claim 23, wherein the second sensor is adapted to be worn by a rider in use, and wherein the blanket further includes a connector for coupling the second sensor to the blanket in use.

43) (New) Apparatus according to claim 23, wherein the second sensor is provided in the blanket.

44) (New) Apparatus according to claim 23, wherein the blanket further includes a power supply for coupling to the first and second sensors.

45) (New) Apparatus according to claim 44, wherein the power supply includes at least one battery connected to a first part of an inductive coupling, and wherein, in use, the battery is recharged by connecting the first part of the inductive coupling to a second part of the inductive coupling, the second part being coupled to a power supply.

46) (New) Apparatus according to claim 23, wherein the blanket further includes a communications device coupled to the first and second sensors to thereby transfer at least one of the indicating and position data to a remote computer system.

47) (New) Apparatus according to claim 23, wherein the blanket further includes a store coupled to the first and second sensors to thereby store at least one of the indicating and position data to a remote computer system.

48) (New) Apparatus according to claim 23, wherein the apparatus includes a processing system coupled to at least one of the first and second sensors for at least partially analyzing at least one of the indicating and the position data.

49) (New) Apparatus according to claim 48, wherein the processing system is coupled to a display, the display being adapted to provide an indication to the rider in accordance with at least one of the indicating and the position data.

50) (New) Apparatus according to claim 23, wherein the first sensor is a heart rate sensor and wherein the blanket includes at least one electrode coupled to the heart rate sensor and positioned so as to be in contact with the horse in use.

51) (New) Apparatus according to claim 50, wherein the blanket includes at least one wire embedded in the blanket material, the wire being adapted to connect the heart rate sensor to the at least one electrode.

52) (New) Apparatus according to claim 51, wherein the blanket is a woven blanket and wherein the wire is integrated within the weave of the blanket.

53) (New) Apparatus according to claim 23, wherein the first sensor is removably mounted to a pouch, the pouch including one or more connectors adapted to cooperate with corresponding detectors provided on the sensor, to thereby couple the sensor to the blanket.

54) (New) Apparatus according to claim 24, wherein the processing system includes a communications device for receiving the indicating and position data.

55) (New) Apparatus according to claim 24, wherein the processing system determines the health status of the horse using a predetermined algorithm, the predetermined algorithm defining a relationship between the at least one health status indicator and movement of the horse.

56) (New) Apparatus according to claim 55, wherein the predetermined algorithm includes: (a) determining at least a low heart rate during low speed exercise; (b) determining a number of heart rates during high speed exercise; (c) perform linear regression to calculate a linear regression line; (d) calculate, using the linear regression line, the velocities at least one of: (i) heart rates of 200 beats per minute (V200); and, (ii) HRmax (VHRmax); and, (e) determine a fitness indicator in accordance with the calculated at least one velocity.

57) (New) Apparatus according to claim 56, wherein the line regression line is determined in accordance with:  $HR=a+bV$ , where HR=heart rate; a=constant; b=constant; and, V=velocity.

58) (New) Apparatus according to claim 56, wherein the method further includes deleting any outlier values.

59) (New) Apparatus according to claim 25, wherein the processing system includes a communications device for receiving the indicating and position data.

60) (New) Apparatus according to claim 25, wherein the processing system determines the health status of the horse using a predetermined algorithm, the predetermined algorithm defining a relationship between the at least one health status indicator and movement of the horse.

61) (New) Apparatus according to claim 60, wherein the predetermined algorithm

includes: (a) determining at least a low heart rate during low speed exercise; (b) determining a number of heart rates during high speed exercise; (c) perform linear regression to calculate a linear regression line; (d) calculate, using the linear regression line, the velocities at least one of: (i) heart rates of 200 beats per minute (V200); and, (ii) HRmax (VHRmax); and, (e) determine a fitness indicator in accordance with the calculated at least one velocity.

62) (New) Apparatus according to claim 61, wherein the line regression line is determined in accordance with:  $HR=a+bV$ , where HR=heart rate; a=constant; b=constant; and, V=velocity.

63) (New) Apparatus according to claim 61, wherein the method further includes deleting any outlier values.